

STCG TANK SUBGROUP MEETING

May 14, 1997

Welcome/Introductions (Tom Tebb)

Tom welcomed the group and asked for introductions around the table. He stated that it's time to resurrect the annual activities calendar to start planning meeting agendas in advance. We need to get organized to begin this year's technology needs assessment process, which must be finished by September 30.

TFA Response to Tank Needs (Cathy Louie)

Cathy distributed a paper called "Tanks Focus Area Site Needs Assessment FY 1997", which describes the outcomes of the site technology needs identification and prioritization, as well as the initial phases of TFA's technical response development. Any comments on this paper should be sent to Cathy.

TFA gathered 90 technology needs from the four tank sites: Hanford, Idaho, Oak Ridge, and Savannah River. Their technical responses to these needs were prioritized using four criteria: broad-based benefit (multi-site), cost reduction (mortgage reduction) potential, support to TFA strategic goals, and user commitment to deploy. The most heavily weighted criterion was user commitment to deploy. It was suggested that next year, the Subgroup should use the TFA criteria to prioritize technology needs.

TFA plans to re-evaluate their strategic goals (shown on page 2.5 of the paper Cathy distributed) in the near term, and they requested that any input from the Subgroup be given to Cathy.

TFA's technical response to the technology needs is available on the TFA homepage at the following address:

<http://www.pnl.gov/tfa/>

Regarding the Hanford Tanks Initiative (HTI), Dirk Dunning noted that the FY 2000 scope for TFA need 679 (Retr 1) regarding development of closure plans was rejected by the Subgroup and should be deleted. Data obtained from HTI will eventually lead to a closure process, and closure of tanks in Savannah River will provide input for Hanford as well. Dirk also stated that TWRS should coordinate with the vadose zone expert panel led by Ralph Patt. Lastly, Dirk said that AX-104 may be the wrong tank to use for HTI since it is not representative. Cathy took an action to engage the HTI Team and DOE-RL/TWRS Management in discussions to consider selecting another tank for HTI. Paul Scott suggested that it is time to bring Bill Root back to the Subgroup for an update on HTI, along with the DOE Project Manager (Craig West), and the Subgroup concurred.

The FY 1999 TFA funding is allocated as follows:

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|---|----------------|-------------------------------------|
| • | Idaho | \$3.1 million |
| • | Oak Ridge | \$3.4 million |
| • | Savannah River | \$4.1 million |
| • | Hanford | \$10.4 million (\$7 million is HTI) |

Jeff Frey distributed copies of the agenda for the TFA/Community Leaders Network/Hanford Stakeholders Retreat on May 15-16. Tank Subgroup members were invited to attend. The purpose of the retreat was to gain the detailed advice of stakeholders concerning issues facing the TFA and to revise TFA's stakeholder involvement plan.

Status of TDI Proposals (Paul Scott)

Paul distributed copies of a handout showing that the following seven TDI proposals were submitted by the TWRS Program:

- Expedited Assessment of Contaminant Mobility Beneath Single-Shell Tanks
- Slurry Monitoring Technology
- High-Level Waste Tank Integrity Assurance
- Long-Length Contaminated Equipment Disposal System
- Portable Remote Pit Operations and Decontamination Unit
- Vacuum Excavator
- New Generation Transfer Pump

A total of 14 proposals were submitted by the Hanford Site. Additional information can be found on the TDI homepage at the following address:

<http://wastenot.inel.gov>

All TDI proposals are being scored against the following criteria:

- | | | |
|---|------------------------------------|-------------|
| • | technical efficacy (will it work?) | 400 points |
| • | cost impacts | 300 points |
| • | regulatory/stakeholder | 150 points |
| • | applicability to other sites | 150 points |
| • | total | 1000 points |

Paul wonders why some new technology needs came out during the TDI process that did not surface during the technology needs generation process last fall.

K-Basin Sludge and Fuel Technology Options (Eric Gerber)

The K-Basins present significant challenges for Hanford cleanup. They contain 2100 metric tons of metallic uranium fuel, which represents 80% of DOE's spent fuel inventory, and there are no near-term disposition options. The basins also contain corroded fuel with 70 cubic meters of sludge. The wastes include remote-handled radioactive waste, hazardous waste, toxic waste, and PCBs. In addition, the leaking 1950s-vintage basins are within 400 yards of the Columbia River. In the past, some 15 million gallons of contaminated water have leaked into the soil. The K-East Basin is in extremely bad shape. About 50% of the fuel elements are breached, and some of the cladding is totally empty. The key challenges for the Spent Fuel Program are (in order of importance): 1) schedule, 2) regulatory issues, 3) cost, and 4) technology.

Several non-TWRS alternatives have been evaluated and rejected, including:

- Grout immobilization/WIPP Disposal
- Grout Immobilization/Onsite Disposal
- PCB Treatment/Wasteform Compatible with Repository

Eric stated that in April 1997, DOE/RL concurred with FDH's recommendation of sludge disposal through TWRS vitrification. Carolyn Haass and Cathy Louie disputed this concurrence. There are key safety issues, process issues, and regulatory issues surrounding the TWRS disposal option. All safety and process issues can be resolved through sludge pretreatment for particle size reduction, oxidation of metallic particles, and pH adjustment. Several PCB destruction/immobilization technologies have been evaluated:

- wet oxidation
- solvent extraction/solvent disposal
- calcination/PCB incineration
- vitrification/PCB incineration
- thermal desorption/PCB collection
- grout
- in situ vitrification
- gel

A planned recommendation for sludge storage is due in June 1997, and sludge removal is scheduled to begin in September 2000.

Improvements to Technology Needs Generation Process (Paul Scott)

Paul stated that the PHMC sees the technology needs generation process as the starting point for many other activities. Unfortunately, last year's call for technology needs was not comprehensive or systematic. The PHMC needs a screen to determine which needs should come before the Subgroup and which ones should be handled by the subcontractors executing the baseline. Dirk

said that if there are no significant ES&H impacts on the outside world, then the Subgroup shouldn't care, unless they can help secure DOE funding.

The PHMC is only responsible for the baseline and has no funds to explore alternatives. However, someone should assess the risks of any identified alternatives as compared to the baseline. Questions were raised regarding what value the Subgroup adds and where the Subgroup can have an impact. It was also mentioned that we need to develop a charter for the Subgroup and determine what kinds of issues should be addressed in this forum. Paul will come up with some suggestions, but everyone should bring a list of recommended process improvements to the next meeting. In addition, the STCG Management Council will soon be addressing Subgroup roles and responsibilities.

The Subgroup also needs to revisit the annual schedule of activities developed last summer. The technology needs assessment process must be finished by September 30 this year, so it must get started very soon.

Action Items

1. Engage the HTI Team and DOE-RL/TWRS Management in discussions regarding the need to consider selecting a different tank for HTI (Cathy Louie).
2. Send copies of the following TDI proposals to Ralph Patt: "Deploy ERT Using the Cone Penetrometer" and "Multi-Sensor Soil Sampling Probes Using the Cone Penetrometer". These are numbers 23 and 24 on Paul Scott's table (Cathy Louie).
3. Prepare a list of suggested improvements to the technology needs generation process (everyone, but especially Paul Scott).
4. Resurrect the annual activities calendar to start planning meeting agendas in advance (Facilitator).

Meeting Attendees

Dirk Dunning (Oregon Office of Energy)
Linda Fassbender (PNNL)
Jeff Frey (DOE-RL/TFA)
Eric Gerber (FDH/Spent Nuclear Fuel Program)
Carolyn Haass (DOE-RL/TWRS)
Cathy Louie (DOE-RL/TWRS)
Lance Mamiya (DOE-RL/TFA)
Vince Panesko (Pacific Rim Enterprise Center)
Loni Peurrung (PNNL)
Paul Scott (FDH/Technology Management)

Gary Sevigny (PNNL)
Harold Stafford (DOE-RL/TWRS)
Tom Tebb (Ecology)
Marv Weiss (CLN)

Next Meeting

The next Tank Subgroup meeting will be held on June 11 from 1:00-5:00 p.m. in the ISB-1 White Bluffs Room. Potential agenda topics include:

- TDI Proposal Selection Results (Cathy Louie)
- Update on HTI (Bill Root)
- Report on TFA/CLN/STCG Retreat (Cathy Louie and Tom Tebb)
- Improvements to Technology Needs Generation Process (Paul Scott)
- Subgroup Annual Activities Calendar (Facilitator)

Please send any additional suggestions you may have for agenda items to Linda Fassbender.